and wherein said polypeptide has substantially reduced enzymatic activity associated with pertussis toxin reactogenicity.

6. The cloned gene of claim 5 wherein said toxin comprises exotoxin subunit S1.

7. The cloned gene of claim 6 wherein said substantially reduced enzymatic activity results from site-specific mutagenesis in said S1 subunit.

8. The cloned gene of claim 7 wherein said site-specific mutation occurs in the region bounded by tyrosine 8 and proline ~~15~~ 14, inclusively.

9. The cloned gene of claim 8 wherein said site-specific mutation involves arginine at position 9.

10. The cloned gene of claim 9 wherein said arginine at position 9 is replaced with lysine.

Remarks

Claim 1 has been canceled and new claims 5-10 added. Support for claims 5-10 may be found throughout the original disclosure; with particular attention to pages 43-47(a). Thus, claims 5-10 do not introduce new matter.

Responsive to the Restriction Requirement mailed April 1,

1991, applicant elects, with traverse, the invention of Group I, claim 1, drawn to a cloned gene. This claim has been canceled by the instant Preliminary Amendment, and replaced by claims 5-10 drawn to the same cloned gene invention.

It is respectfully submitted that the Examiner's basis for defining distinctness between Inventions I and II is in error. The Examiner stated:

> "The inventions are distinct, each from the other because of the following reasons:
>
> The inventions of Group I and II are capable of separate manufacture, use, and have different properties as claimed and are patentably distinct. The pertussis gene of Group I can be obtained by traditional chemical synthesis and is useful as a genetic probe. The polypeptides of Group II can be obtained by traditional solid phase chemical synthesis and thus do not have to be obtained via a process requiring recombinant DNA or any other biological route to obtaining the protein."

The Examiner's allegation regarding capability of separate manufacture may have been relevant were the distinctness relationship of the two groups one of process of making and product made [per MPEP 806.05(f)]. However, this is not the relationship of Groups I and II. Next, the Examiner alleged the inventions of Group I and II are capable of separate use. Separate use may be a basis for distinctness between two inventions related as product and process of use [see MPEP 806.05(h)]. However, instant Groups I and II are not related as product and method of use. The Examiner's next statement that the inventions of Group I and II "have different properties as claimed" is not a recognized and

valid distinctness criteria upon which to base a restriction requirement. It is submitted that all claims must "have different properties" or they would be subject to criticism as being duplicative or not further limiting a prior claim. The Examiner's conclusion that Groups I and II "are patentably distinct" requires a basis within the guidelines of MPEP 806.05. The bases provided by the Examiner correspond to product and process of making or process of use. As indicated above, however, these distinctness categories do not correspond to the relation between the inventions of Group I and II. Clearly, the inventions of Group I and II are related. It is equally clear that they are not related by any of the distinctness categories enumerated in MPEP 806.05. Consequently, restriction is not proper, and the Examiner is respectfully requested to rejoin the inventions.

Respectfully submitted,

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